

ABSTRACT OF THE DISCLOSURE

A tamping machine for tamping ballast underneath track ties includes a machine frame extending in a longitudinal direction and supported on the track by two undercarriages. Arranged between the undercarriages is a sub-frame which is supported on the track by a further undercarriage with a unit motive drive and connected to the machine frame by a frame support for displacement relative thereto in the longitudinal direction. A tamping unit and a track lifting unit are arranged on the sub-frame between the further undercarriage and the frame support. Operation of the unit motive drive to displace the sub-frame is assisted by an acceleration drive which is rigidly connected to the machine frame and has a piston end with a bracing plunger provided for temporary application to the sub-frame. A maximum stroke of the acceleration drive is shorter than a maximum displacement path of the sub-frame relative to the machine frame.